

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



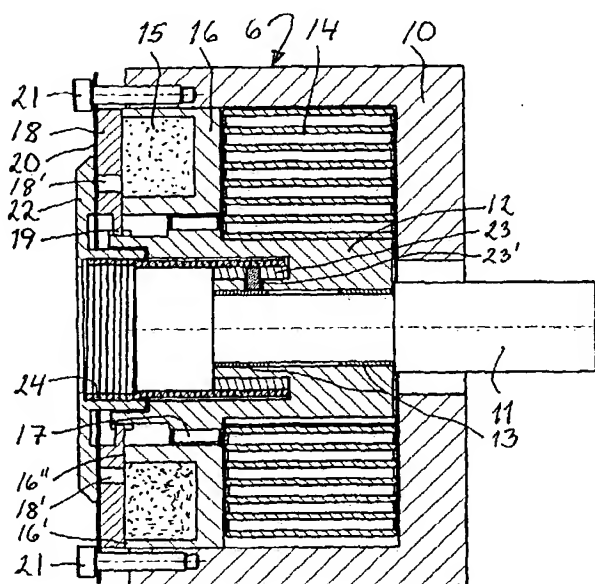
(43) International Publication Date  
27 June 2002 (27.06.2002)

PCT

(10) International Publication Number  
**WO 02/49892 A1**

- (51) International Patent Classification<sup>7</sup>: **B60T 1/10**, F03G 1/02, 7/08, F16D 61/00, 63/00
- (21) International Application Number: PCT/SE01/02808
- (22) International Filing Date:  
18 December 2001 (18.12.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
0004716-7 20 December 2000 (20.12.2000) SE
- (71) Applicant (for all designated States except US): **HALDEX  
BRAKE PRODUCTS AB** [SE/SE]; Box 501, S-261 24  
Landskrona (SE).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:  
— with international search report
- (72) Inventor; and  
(75) Inventor/Applicant (for US only): **SEVERINSSON,  
Lars** [SE/SE]; Nordanåvägen 27, S-310 21 Hishult (SE).
- (74) Agent: **STRÖM & GULLIKSSON IPC AB**; Box 4188,  
S-203 13 Malmö (SE).

(54) Title: A SPRING BRAKE ACTUATOR



(57) Abstract: A spring brake actuator is mounted with its shaft (11) connected to the rotational operative shaft of a service brake actuator. The spring brake actuator has a clock spring (14), which is mechanically charged at a rotation of the actuator shaft in a brake release direction. It also has an electric coil (15) for keeping when electrically energized - the clock spring in its charged condition. Further, it has means (12, 24, 18-22) for transferring the rotative energy of the clock spring to the actuator shaft in a brake applying direction, when the coil is energized, but allowing free rotation of the shaft in either direction, when the coil is energized.

WO 02/49892 A1